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- 22. The system of claim 17 wherein the ultrasonic transducer is a capacitive micromachined ultrasonic transducer (CMUT) array including at least two CMUT elements.
- 23. The system of claim 17 further comprising at least one of a temperature sensor or pressure sensor integrated with the flexible member.
- 24. The system of claim 17 wherein the ultrasonic transducer includes at least a portion of a circular capacitive micromachined ultrasonic transducer array that is circular at least prior to the shaping.
- **25**. The system of claim **17** wherein the flexible member is integrated with at least one of the CMUT or the ICs by at least one of coating, evaporating, sputtering or deposition.
- **26**. A method of manufacturing an ultrasonic system, the $_{15}$ method comprising:

providing a substrate with a capacitive micromachined ultrasonic transducer (CMUT);

patterning an insulation layer onto the substrate and the CMUT;

patterning a conductive layer onto a portion of the insulation layer, the conductive layer conductively connecting to the CMUT, wherein the CMUT, the insulation layer, and the conductive layer make up at least a portion of a flexible subassembly:

removing the flexible subassembly from the substrate; and shaping the flexible subassembly.

27. The method of claim 26, further comprising:

prior to removing the flexible subassembly from the substrate, forming a plurality of bonding pads on the flexible subassembly, the bonding pads conductively connecting to the conductive layer; and

connecting an electrical integrated circuit to the plurality of bonding pads.

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28. The method of claim 26, further comprising: providing the substrate with an electrical integrated circuit (IC) on the substrate; and

patterning the conductive layer to conductively connect to the IC.

29. The method of claim 26, wherein the providing the substrate with the CMUT comprises at least one of:

fabricating the CMUT on the substrate; or

placing the CMUT on the substrate.

30. A method comprising:

disposing a capacitive micromachined ultrasonic transducer (CMUT) on a wafer;

applying an insulation layer of a first material and a conductive layer of a second material to the wafer and the CMUT:

removing the wafer to obtain a subassembly comprising:

the insulation layer,

the conductive layer, and

the CMUT; and

shaping the subassembly to have at least one curved part. 31. The method as recited in claim 30, further comprising: bonding an integrated circuit (IC) to the subassembly on a side of the insulation layer opposite to the CMUT; and electrically connecting the IC to the CMUT via the conductive layer.

- 32. The method as recited in claim 30, further comprising, prior to the applying the insulation layer, forming a trench in the wafer to define at least a portion of a boundary of the CMUT.
- 33. The method as recited in claim 30, further comprising, prior to the applying the insulation layer, disposing an integrated circuit on the wafer, wherein the applying the insulation layer includes applying the insulation layer to the integrated circuit.

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